

REMARKS/ARGUMENTS

Claims 1-6, 8, 9, 11-14, 17, 18, and 20-22 are currently pending in the application.

Claim Rejections – 35 USC § 112

Claim 14 stands rejected under 35 USC § 112, first paragraph as failing to comply with the written description requirement. According to the Examiner, the claim “contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) at the time the application was filed, had possession of the invention.” Applicant points out in the background section of the invention, at page 2, lines 7-13, that crosslinking is identified as something to be avoided, clearly indicating a preference for no crosslinking. Additionally, at page 3, line 22, Applicant refers to the present application as “non cross linked foaming applications”. The use of the term “non” is generally equated with “no” crosslinking. Thus, Applicant respectfully contests the Examiner’s assertion that “no crosslinking” is not supported in the specification as filed.

Alternatively, if the Examiner would prefer, he is authorized to make an Examiner’s amendment to reinstate the original language “substantially no crosslinking”. In a previous Office Action dated July 31, 2009, the Examiner had objected to this original language, stating that “the phrase ‘substantially no crosslinking’ renders the claim indefinite” (see July 31, 2009 Office Action paragraph 7). However, in the May 24, 2010 Office Action, the Examiner has stated “no crosslinking” is *clearly* narrower than ‘substantially no crosslinking’ (emphasis added) (see May 24, 2010 Office Action, paragraph 9). As the only way this statement can be true is if “substantially no crosslinking” had a definite meaning to one skilled in the art, this could be taken to be an admission that the original language is not indefinite, as previously stated by the Examiner.

Claim Rejections – 35 USC § 103

Claims 1-6, 8, 9, 11-14, 17, 18, and 20-22 stand rejected under 35 USC § 103(a) as being unpatentable over DeVaudreuil (US 6,114,025) in view of Heider (US 4,360,556). The following elements from claim 1 are missing from DeVaudreuil.

- 1) requirement that the film is a blown film;
- 2) requirement that at least one foamed sheet is 3 to 8 mils thick
- 3) MD tear strength of at least 150 g/mil
- 4) Density reduction of from 10 to 50 percent

Taking these factors in order, blown film is physically different from cast film as is readily understood by those in the art. To this argument the Examiner has responded that the recitation of a blown film is a process limitation which has no bearing on a product claim. Applicants respectfully contest this, as it is generally known in the art that a cast and blown film made from the same material will have different properties (see for example, http://www.packageit.com/index.php?option=com_content&view=article&id=111&Itemid=185) such that the skilled artisan can readily tell the difference between the two. Thus “blown film” to a person of ordinary skill in the art has physical attributes which are relevant to a product claim. This is analogous to how the term “frozen water” may be construed as containing a process limitation and yet the resulting product is readily identified without regards to the process.

Next is the requirement that the film has a thickness of from 3 to 8 mils thick. In response to this point the Examiner pointed to Col 7, lines 4-8 of DeVaudreuil for support that the range of thickness is “clearly overlapping”. However the passage cited by the Examiner recites that the thickness is “less than 13mm” with a preferred range of from 0.5 mm to 13 mm. Thirteen millimeters is equivalent to about 512 mils, or 64 times higher than the upper limit permitted by the present claims. Saying that “less than 13mm” fairly teaches films having a range of 3 to 8 mils is akin to saying that an advertising boast that a particular automobile gets “over 30 mpg” destroys novelty for a vehicle getting at least 15,360 mpg (30 times 512). Clearly a person of ordinary skill in the art would not equate the two. Nor would a person of ordinary skill in the art equate films of 3 to 8 mils with a reference claiming films of less than 13mm, particularly given the preferred range showing that the lowest preferred range is still more than two and a half times higher than the upper limit recited in the present claim 1. Note also the statement in DeVaudreuil at col. 7 line 8 specifically calling out that films thicker than 13 mm were contemplated.

Next is the requirement in Claim 1 that the films have an MD tear strength of at least 150 g/mil. DeVaudreuil states (at col.8, line 12) a most preferred MD tear strength of “greater than about 2.00 kN/m, which is the equivalent of about 6.11g/mil. Moreover in the Examples presented in Table 1, the Example with the highest MD tear strength (Example 14) only had an MD tear strength of 4.26 kN/m, or about 13.01 g/mil, which are more than a factor of 10 less than required in the present invention. In this regard, it is respectfully pointed out that the Examiner’s comments at page 6 of the Office Action insinuating that since the foams of DeVaudreuil are made of the same materials as recited in the present application, the foams of DeVaudreuil would inherently have the same properties such as tear strength and oxygen vapor transmission, is negated by the values actually reported in the Examples. At page 9 of the Office action, the Examiner has stated that “Applicant argues that the materials of DeVaudreuil will not have the tear strength recited in the present claims . . . [h]owever, . . . the arguments of counsel cannot take the place of evidence in the record”. Applicants respectfully point out that DeVaudreuil itself provides the evidence that its films fail to meet the tear strength. Thus, this is not a case of unsupported attorney arguments.

Finally, Claim 1 requires a density reduction in the range of from 10 to 90%. Although DeVaudreuil does not report density reduction, it teaches that its foams will have a final density in the range of from 10 kg/m³ to a maximum of about 150 kg/m³ (see col 6, lines 53-54). Given that the starting materials specified in DeVaudreuil have a density of about 920 kg/m³, this represents a density reduction of about 83-99%, which again is for outside the upper limit of 50% recited in the claims.

Given the drastic differences in these numerous factors, clearly the films of DeVaudreuil are not analogous to the films recited in claim 1, and thus it is not clear why a person of ordinary skill in the art would nonetheless select the resins recited in DeVaudreuil as maintained by the Examiner.

The Examiner has acknowledged DeVaudreuil specifies too great of a density reduction, but claims that claim 1 is obvious over DeVaudreuil when combined with US 4,360,556 to Heider. Heider teaches a foamed low density sheet having a density reduction of about 10 to 20 percent. Thus the Examiner contends that a person of ordinary skill in the art would combine the teachings of DeVaudreuil with Heider to

arrive at claim 1. It is first noted that combining Heider with DeVaudreuil still does not address elements 1-3 as presented above. Specifically, please note the following: 1) Heider does not discuss blown films and the Examples in Heider are cast films. 2) Heider teaches a range of thickness of from 14 to 18 mils, which, while less than DeVaudreuil, is still well outside the upper limit of 8 mils recited in Claim 1. And finally 3) Heider does not provide any numerical guidance as to the tear strength of its materials. Thus even after combining the references as suggested by the Examiner, each and every element of claim 1 is not taught or suggested.

Just as importantly however, it is respectfully repeated that a person of ordinary skill in the art would not consider all “foamed films” to be interchangeable and thus would not make the combination being suggested by the Examiner. As a person of ordinary skill in the art readily understands, a foamed film intended to be used for “protective packaging of heavy, delicate, and valuable items such as furniture” (see DeVaudreuil col. 1, lines 22-23) has very different physical requirements from a foamed film intended for six-pack carrier rings (see Heider col. 1, lines 11-12). For the protective foams of DeVaudreuil, the tear strength is not as important as the resiliency of the foam, whereas resiliency is not a critical factor at all for six-pack carriers. Thus it is not clear why a person of ordinary skill in the art would seek to modify the resilient foams of DeVaudreuil by decreasing the density reduction from 83 to 99% to only 10 to 20 % as taught by Heider, knowing that such change would make them less resilient, and therefore less effective for their intended function. As previously pointed out, the fact that Heider was published about 16 years before DeVaudreuil was filed, and yet DeVaudreuil still teaches density reduction of at least 83% is a strong indication that a person of ordinary skill in the art would not modify the foams of DeVaudreuil as suggested by the Examiner.

It is also respectfully submitted that a person of ordinary skill in the art would understand that the physical attributes necessary for a resin to be suitable for use in cast films are very different from the physical attributes necessary for a resin suitable for use in blown film, and as such would not readily incorporate the teachings of Heider or DeVaudreuil when looking to make a blown film.

The Examiner has characterized the recitation of films of 3 to 8 mil thickness as a matter “within the bounds of routine experimentation”. Applicant respectfully

contests this assertion. While thinner films are generally acknowledged to be preferred, it is readily understood that there are consequences to such downgrading in terms of degradation of physical properties of the films as well as limitations on the equipment. Indeed, if making thinner films was simply a matter of routine optimization then all films would be fraction of a mil in thickness, as absent degradation of properties it would always be preferred to make thinner films as they would be more economical as they would require less resin to make and would weigh less for easier shipping. As previously discussed in earlier responses, however, and as would be readily understood by one of ordinary skill in the art, as the film becomes thinner and thinner, the strength (among other properties) of the film will also decrease. At some point the foam bubbles eventually will be larger than the thickness of the film at which point the integrity of the film will fail, making it clear that there is a limit to thinness achievable through routine optimization. Thus, blown films having claim 1's combination of thinness while simultaneously achieving good MD tear strength, is not simply a matter of optimization as these properties tend to run counter to each other.

For these reasons it is respectfully requested that the rejections under 35 USC §103(a) based on DeVaudreuil in combination with Heider be reconsidered and withdrawn.

Claims 12 and 21 were also rejected under 35 USC §103(a) as being unpatentable over DeVaudreuil/Heider in light of Hughes et al (US 3,963,403). As Hughes does not address any of the shortcomings of DeVaudreuil or Heider discussed above, it is respectfully requested that these rejections be withdrawn.

Accordingly, it is respectfully submitted that the claims as amended are patentable over all of the art cited by the Examiner. Withdrawal of the rejections and a Notice of Allowance is now courteously solicited.

Appln. No. 10/560,732
Response dated August 24, 2010
Reply to Office Action of May 24, 2010

August 24, 2010

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